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GEOGRAPHICAL PUBLICATIONS

(Reviews and Titles of Books, Papers, and Maps)

For key to classification see "Explanatory Note" in the January number, pp. 57-61

NORTH AMERICA

ALASKA

MUIR, JOHN. **Travels in Alaska.** viii and 327 pp. Ills., index. Houghton Mifflin Co., Boston, 1915. $2.50. 8½ x 5½.

It is indeed fortunate that a permanent record is available of John Muir's Alaska explorations and studies, for the student has in the past been forced to rely on more or less fugitive articles relating to this important work. When Muir made his first journey into southeastern Alaska in 1879 its glaciers had never been studied, and the grandeur of the fiorded coast line was known to but few. It was his vivid account of the magnificent scenery and his sympathetic description of the mountains and glaciers that gave the first call to the mountaineer and naturalist to explore this new field. John Muir's discovery of Glacier Bay and its great ice fields is generally known; but less attention has been paid to his many other contributions to geographic knowledge, such as his exploration of minor bays and visits to glaciers. Aside from the value and interest of its scenic descriptions, the book is full of references to native customs, plants, and animals, as well as to glacial phenomena. It should be read by every nature lover and should be the companion of every Alaska traveler. ALFRED H. BROOKS.

ELLSWORTH, C. E., AND R. W. DAVENPORT. **A Water-Power Reconnaissance in South-Central Alaska.** With a section on Southeastern Alaska, by J. C. Hoyt. 173 pp. Maps, diagrs., ills., index. *U. S. Geol. Surv. Water-Supply Paper 372.* Washington, 1915. [The area investigated extends from the Bering River Basin to the eastern part of the Kenai Peninsula. It is favored with abundant small water-power resources and includes also a few sites where 1,000 to possibly 5,000 horsepower might be developed. Sources of possible competition lie in the valuable coal and oil fields of this and adjacent areas. The investigations are to be continued this summer (see note on the plans of the U. S. Geological Survey in the April *Review*, p. 306).]

GRAVES, H. S. **The Forests of Alaska.** Ills. *Amer. Forestry*, No. 265, Vol. 22, 1916, pp. 24-37. [Abstracted in the March *Review*, pp. 216-217.]

KEEN, DORA. **First Exploration of an Alaskan Glacier.** Ills. *Mazama*, Vol. 4, 1915, No. 4, pp. 38-39. Portland, Ore.

MOYE, M. **Le tremblement de terre de l'Alaska du 11 septembre 1899.** *Bull. Soc. Languedocienne de Géogr.*, Vol. 38, 1915, No. 3, pp. 194-203. Montpellier.

CANADA

Alberta, Saskatchewan, Manitoba

ADAMS, F. D., AND W. J. DICK. **Discovery of Phosphate of Lime in the Rocky Mountains.** 36 pp. Maps, diagrs., ills., index, bibliogr. Commission of Conservation, Ottawa, 1915.

Investigations recently carried out by the Commission of Conservation of Canada show a decreased yield in the older grain fields of the Canadian West. The decrease is in large measure due to depletion of the phosphate content of the soil. Sources of supply for a restoration of this content have been considered. The phosphate deposits of Canada known heretofore were limited to the apatite beds of the eastern provinces, with an output never great and altogether insignificant since 1892. In the world's supply of phosphate the United States holds the foremost position, Tunis follows, and other countries contribute comparatively small amounts. The importance of the United States as a producer of phosphate dates back, a short time only, to the discovery of the rich deposits of the western states—Utah, Idaho, Wyoming, and Montana. Throughout this area the phosphate occurs in a well-defined geologic horizon near the top of the Carboniferous. The Montana beds, located roughly two degrees south of the international boundary, suggest the possibility of the occurrence of similar beds in a similar horizon north of the line. The Conservation Commission decided to investigate. Three sections across the Canadian Rockies were selected for reconnaissance, the North Kootenay and Crowsnest Passes, and the Rocky Mountain Park at Banff. In the two former sections Upper Carboniferous strata were proved absent, but in the Banff Park area phosphate, resembling the Montana product in many respects, was found in the same horizon. The discovery and its significance are detailed in the present report, which, in addition, gives suggestions to prospectors who may wish to follow up the discovery, and a bibliography of literature relative to Western phosphate deposits.

Geological map of Alberta, Saskatchewan, and Manitoba. 1:2,217,600. Geological Survey, Dept. of Mines, [Ottawa], 1913.

Map showing irrigation schemes in Alberta and Saskatchewan. 1:2,217,600. Irrigation Office, Dept. of the Interior, Ottawa, 1913.

Ontario, Quebec

JOHNSTON, W. A. **Rainy River District, Ontario: Surficial Geology and Soils.** xii and 123 pp. Maps, ills., index, bibliogr. *Geol. Surv. of Canada Memoir 82: Geol. Series No. 68.* Ottawa, 1915. [Abstracted in the February *Review,* p. 142.]

—— **Mineral Production in the Province of Quebec during 1915, Preliminary Statement on the.** 7 pp. Dept. of Colonization, Mines, and Fisheries, Quebec, 1916. [The heavy decrease in production of structural materials has not been compensated by the increase of metalliferous ores to a record figure.]

Geology [of] St. Hilaire and Rougemont Mountains, Rouville and St. Hyacinthe Countries, Quebec. 1:126,720. Accompanies, as Map 101A, "St. Hilaire (Beloeil) and Rougemont Mountains" by J. J. O'Neill, *Geol. Surv. of Canada Memoir No. 43.* Ottawa, 1914. [The text which this map illustrates was noticed in the Feb. *Review,* p. 151.]

Rainy Lake, Rainy River District, Ontario. 1:63,360. Map 98A, Geological Survey, Dept. of Mines, [Ottawa], 1914. [Also accompanies the report by W. A. Johnston listed above.]

Geology [of] Southwestern Ontario: Outline Map. 1:500,000. Accompanies, as Map 116A, "The Devonian of Southwestern Ontario" by C. R. Stauffer, *Geol. Surv. of Canada Memoir No. 34.* Ottawa, 1915.

UNITED STATES

North Atlantic States

—— **New York City, Development and Present Status of City Planning in: Being the Report of the Committee on the City Plan,** December 31, 1914, together with papers presented at a meeting of the Advisory Commission on City Plan, December 17, 1914. 76 pp. Maps, diagrs., ills. Board of Estimate and Apportionment [of the City of New York], New York, 1914. 10½ x 6½.

New York has an admirable institution in this Committee on the City Plan. Five borough presidents give it weight, and practical wisdom is provided by the Advisory Commission of twenty-four citizens. They do not expect to formulate a plan for years. For the present they are gathering solid information on the unknown facts that constitute a great city's daily life. Whatever plan they some day submit will be flexible and responsive to changing conditions. These papers serve to formulate the problems that await the Committee's action. Two items may here be dwelt upon: (1) A mistake that cannot be undone is the arrangement on Manhattan Island of numerous cross streets to carry traffic that engineer Randall expected in 1807 to flow from river to river across the infrequent avenues that run the long way of the island. Perhaps it could not have been made out in 1807, by any amount of study, that the main traffic must flow along the avenues. At any rate the blocks run the wrong way, and heavy streams of people and vehicles move along too infrequent avenues on lines interrupted thrice as often as need be by street openings, all because of a faulty conception of traffic needs. (2) On the other hand the Committee has to meet and overcome an enormous opposition of private interests that have no thought of yielding anything to the common good. Myrtle Avenue was laid out 100 feet wide from the Brooklyn Borough line to Jamaica. But the city delayed purchasing title to the required land. Buildings were put up across the proposed lines, and the property owners then forced the narrowing of the street to 70 feet. All plans for the improvement of an American city have to be carried out in full democracy.

It is to be hoped that the Committee's studies of growth of population and volume of traffic may find speedy publication. MARK JEFFERSON.

—— **Boston, Consular District of, Trade and Commerce of the, Report for the Year 1914 on the.** 64 pp. Map. *Diplomatic and Consular Repts.,* Ann. Series, No. 5542. London, 1915.

HICE, R. R. **The Mineral Production of Pennsylvania for the Year 1913.** 108 pp. *Topogr. and Geol. Surv. of Pennsylvania Rept. No. 11.* Harrisburg, 1915. [The mineral production of Pennsylvania—exclusive of derived products—amounted to $506,466,759 in 1913, an increase of 13.5 per cent on the record of 1912.]

—— **Jamaica Bay Improvement, First Unit of, Completed.** Map. *Engineering Rec.,* Vol. 73, 1916, No. 12, pp. 392-393. [Mill Basin, on the western, Brooklyn, shore of the bay. The Jamaica Bay improvement is to furnish additional facilities, especially for handling freight, to the port of New York.]

MCSWEENEY, E. F., JOSEPH A. CONRY, AND LOMBARD WILLIAMS. **The Use and Benefits to Massachusetts Manufacturers and Wage Earners of an American Merchant Marine.** 14 pp. Diagrs. *Directors of the Port of Boston Bull. No. 2.* Boston, 1915. [See note in the Feb. *Review,* p. 141.]

—— **Philadelphia, City Planning on an Exceptionally Large Scale . . . . at.** Maps, diagrs., ills. *Engineering Rec.,* Vol. 73, 1916, No. 11, pp. 344-348.

Rand, McNally Commercial Map of Greater New York: Sections A and B. 1:7,200. Rand, McNally & Co., New York, [1915]. [Two white-print maps, covering together Manhattan and the western Bronx, evidently based on the same compilation, although on a larger scale, as the same firm's excellent "New Standard Map of Greater New York," familiar to all travelers on the subway and elevated, which was reviewed at length in the *Bull. Amer. Geogr. Soc.,* Vol. 43, 1911, pp. 795-796. Although the copyright entry bears no date, the map is evidently very recent, as it shows the New York Connecting Railroad and the ferry from Dyckman Street to Englewood, N. J. The 207th Street crosstown surface line over the Harlem is, however, omitted between Broadway and Bailey Avenue.]

Cape Elizabeth to Portsmouth, Maine–New Hampshire. 1:80,000. Chart No. 1205, U. S. Coast & Geodetic Survey, Washington. Edit. of June, 1915. Price, 50 cents.

Portsmouth to Cape Ann, New Hampshire–Massachusetts. 1:80,000. Chart No. 1206, U. S. Coast & Geodetic Survey, Washington. Edit. of June, 1915. Price, 50 cents.

Cohasset Harbor, Massachusetts. 1:5,000. Chart No. 242, U. S. Coast & Geodetic Survey, Washington. Edit. of May, 1915. Price, 30 cents.

Sea Girt Light to Little Egg Inlet, New Jersey. 1:80,000. Inset: Little Egg Inlet, 1:40,000. Chart No. 1216, U. S. Coast & Geodetic Survey, Washington. Edit. of January, 1915. Price, 50 cents.

North-Central States

FLORA, S. D. **Tornadoes in Kansas.** *Monthly Weather Rev.,* Vol. 43, 1915, No. 12, pp. 615-617.

HERROLD, G. H. **Draining the Roseau River Swamp in Minnesota.** Map, diagrs., ills. *Engineering News,* Vol. 75, 1916, No. 8, pp. 366-368.

HERSEY, H. B. **Climatological Data (Annual, 1915): Wisconsin Section.** Maps. *Climatological Data* (Annual), Vol. 20, 1915, No. 13, pp. 99-108. Weather Bureau, Washington, D. C.

WEIDMAN, SAMUEL, AND A. R. SCHULTZ. **The Underground and Surface Water Supplies of Wisconsin.** xxii and 664 pp. Maps, diagrs., index. *Wisconsin Geol. Surv. Bull. No. 35.* Madison, 1915. [Accompanied by a geologic map of Wisconsin, 1:1,000,000, showing artesian conditions and the determinant elevations of the Precambrian.]

South-Central States

CLINE, J. M. **Temperature Conditions at New Orleans as Influenced by Subsurface Drainage.** *Monthly Weather Rev.,* Vol. 43, 1915, No. 12, p. 607. [Author's abstract of paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916. "The frequent occurrence of high temperatures at New Orleans in recent years, which general meteorological conditions did not account for, indicated that some local influences are responsible."]

DEUSSEN, ALEXANDER, AND R. B. DOLF. **Ground Water in Lasalle and McMullen Counties, Texas.** Maps, index. *U. S. Geol. Surv. Water-Supply Paper 375-G,* pp. 141-181. Washington, 1916. [These districts are semi-arid. Agriculture can depend to a limited extent on irrigation from wells and impounded storm waters, but "most of the land if cultivated at all must be reclaimed by the intelligent application of dry-farming methods."]

Roosevelt, Theodore. **The Bird Refuges of Louisiana.** Map, ills. *Scribner's Mag.*, Vol. 59, 1916, No. 3, pp. 261-280. [Thanks to vigorous action on the part of the State Conservation Commission, created only in 1912, the game and water fowl preserves of Louisiana extend for 75 miles along the Gulf Coast and cover an area of 500 square miles. Already there has been notable increase in the species frequenting the shores for breeding purposes. (See also note on "New Duck Species Breeding in Louisiana," *The Wilson Bull.*, No. 92, 1915.)]

Smith, E. A. **Statistics of the Mineral Production of Alabama for 1914.** 64 pp. *Geol. Surv. of Alabama Bull. No. 16.* University, Ala., 1915.

Western States

Bolton, H. E. **Original Narratives of Early American History: Spanish Exploration in the Southwest, 1542-1706.** xii and 487 pp. Charles Scribner's Sons, New York, 1916. $2.50. 9 x 6.

This volume has performed good service in fulfillment of the aim of the series—to render accessible certain important material on early American history. One-third of the material has heretofore been available in Spanish only, and nearly one-third more is from unpublished manuscripts. In addition two important maps, showing respectively the routes of Oñate and De Léon, are here reproduced for the first time, and the whole series of explorations is exhibited on a map compiled from original data.

From New Spain exploration and conquest gradually carried Spanish dominion to the north, into what is now the southwestern United States. Early plans aimed at the settlement of California. In 1542 the Cabrillo-Ferrelo expedition reached as far north as 42° 30′ N. along the Pacific coast. Half a century later the Vizcaino expedition set out with a well-defined objective: an investigation of the possibilities of founding a port of call and defense for the Manila galleons that were wont to find their most practicable return route in a latitude—about 40° N.—far north of Acapulco. Contemporaneously frontiers were being pushed forward in the pueblo district of New Mexico. The Rodriguez (1581) and Espejo (1582-83) expeditions established lines of approach for the province founded by Oñate at the end of the century. The narratives of Oñate's achievements contain much interesting material of a geographical nature—descriptions of the Indian trading expeditions, "An Account of the Discovery of the Buffalo." Somewhat later the frontier was pushed northward into Arizona. Military posts and Jesuit missions led the van, mining and stock raising followed. Most prominent of the pioneer figures of this region was Father Kino, missioner, colonizer, and geographer. He entered Pimería Alta—that part of Arizona later comprehended in the Gadsden purchase—in 1687. He baptized 4,000 Indians, stimulated settlement in Lower California, executed the first authoritative map of southern Arizona, and in his "Cosmographical Demonstration" proved that California was not an island (see "The Isles of California," by Godfrey Sykes, *Bull. Amer. Geogr. Soc.*, Vol. 47, 1915, pp. 745-761). The later seventeenth century saw attention directed towards Texas. The Bosque Larios expedition of 1675 made the first important crossing of the lower Rio Grande, below the confluence of the Pecos. A little later native appeals for help against the Apache influenced the Mendoza-Lopez expedition. Still later the De Léon-Massanet expedition, which, in 1690, founded missions amongst the Tejas, was primarily directed against the reported French occupation of the Gulf Coast.

Diller, J. S., and others. **Guidebook of the Western United States. Part D: The Shasta Route and Coast Line.** 142 pp. Maps, ills., index. *U. S. Geol. Surv. Bull. 614.* Washington, 1915. $1. 9 x 6.

This excellent guidebook and its three companion volumes (reviewed as follows: Overland route, *Bull. Amer. Geogr. Soc.*, Sept., 1915, pp. 697-698; Northern Pacific route, Feb. *Review*, p. 153; Sante Fe route, April *Review*, p. 312) deserve wide circulation. While necessarily restricted in scope and in arrangement by the definite purpose of describing the belt of country adjacent to a railroad route, it is gratifying to note how much of the general physiography and geology of the Pacific Coast is given not only incidentally in the local descriptions but more specifically in the introduction and in footnotes. Remnants of old peneplains and of ocean and river terraces are pointed out at various places from Seattle to Los Angeles and brief explanations given of the crustal movements which can be inferred from them. Peculiarities of stream drainage are frequently noted and their probable evolution described.

Two interesting instances may be mentioned in regions where the regular topographic sheets are available for more detailed study. They are the antecedent course of the Willamette in the gorge between Oregon City and New Era (p. 33) and the superimposed course of the Salinas River in the granite upland northeast of the main valley near Santa Margarita, California (p. 117).

Throughout the volume the illustrations are from well-chosen photographs and in general are so well reproduced that they may be utilized in a reflectoscope or converted into lantern slides.

The volume seems remarkably free from errors. The height of Mount Shasta is given on page 54 as 14,350 feet and on page 56 as 14,380 feet—the reading of the contour map. Mr. F. E. Matthes has recently quoted the U. S. Coast and Geodetic Survey as having revised its measurements and reduced the height to 14,162 feet (*Sierra Club Bull.*, Vol. 9, p. 190). Mount Shasta is so well known that it is to be hoped that there may soon be an agreement on the most accurate determination of its elevation. If the public demand makes a second edition of the series necessary, the index, at present confined to a list of railroad stations, should be extended to physiographic features and general geographic topics. RULIFF S. HOLWAY.

MEXICO AND CENTRAL AMERICA

ADAMS, CYRUS C. **Northern Mexico: The Scene of Our Army's Hunt for Villa.** Map, ills. *Amer. Rev. of Reviews,* Vol. 53, 1916, No. 4, pp. 421-423.

—— **Costa Rica, Trade and Commerce of, Report for the Year 1914 on the.** 13 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5553. London, 1916.

GOLDMAN, E. A. **Plant Records of an Expedition to Lower California.** Map, ills., index. *Contrib. from U. S. National Herbarium,* Vol. 16, 1916, Part 14, pp. 309-371. Smithsonian Institution, Washington, 1916. [The route extended throughout the whole length of the peninsula.]

JUDAY, CHANCY. **Limnological Studies on Some Lakes in Central America.** Maps, diagrs. *Trans. Wisconsin Academy of Sci., Arts, and Letters,* Vol. 18, 1915, Part 1, pp. 214-250. [Abstracted in this number, p. 374.]

—— **Nicaragua, How the United States is Helping: The Ratification of the Nicaragua Canal Treaty the Latest Step in the Effort to Promote the Republic's Prosperity.** Map, ills. *Dun's Rev.: Internatl. Edit.*, Vol. 27, 1916-17, No. 2, pp. 39-44. New York.

RAGUZZI, —. **Il Canale di Panama: 1° anno d'esercizio.** 9 pp. [*Boll.*] *Direz. Gen. degli Affari Commerc.*, 1915, No. 17. Minist. degli Affari Esteri, Rome.

Map of Sonora, Chihuahua, and Coahuila, Mexico. [1:100,000.] War College Division, General Staff, [Washington, D. C.], Dec. 1913. Reproduced for the Pan American Union, Washington, D. C., 1914. [Detailed comment on this map will be found in this number under "Geographical Record" on p. 374.]

WEST INDIES

—— **Barbados: Report for 1914-15.** 15 pp. Map. *Ann. Colonial Repts. No. 871.* London, 1916.

—— **Cuban Prosperity.** *South Amer. Journ.*, Vol. 80, 1916, No. 4, pp. 84-85. London. [The extraordinary sugar crop of 1915-16 points to a forthcoming period of prosperity.]

FREEMAN, W. G. **The Influence of the War on Tropical Agriculture.** Diagrs. *Bull. Dept. of Agric. Trinidad and Tobago,* Vol. 14, 1915, Part 4, pp. 103-107. [Deals specifically with three of the principal products of Trinidad and Tobago—cacao, copra, and sugar.]

GARCÉS, A. D. **Informe del Consulado General de Chile en Cuba, sobre la industria de la pesca.** *Bol. de Relaciones Exteriores,* No. 58, 1915, July, pp. 67-71. Santiago, Chile.

GUTIERREZ-LANZA, MARIANO. **The Climate of Cuba.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 610. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

HALL, MAXWELL. **Storms and Hurricanes in Jamaica, 1635-1915.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 620.

KUPFER, H. F. **Porto Rico's Increasing Prosperity: Sugar, Coffee, Tobacco and Tropical Fruits Promise Good Yields and Have Profitable Markets.** Map, ills. *Dun's Rev.: Internatl. Edit.*, Vol. 27, 1916-17, No. 2, pp. 53-57. New York.

—— **Leeward Islands: Report for 1914-15.** 22 pp. *Ann. Colonial Repts. No. 876.* London, 1916.

MILLÁS, J. C. **The Origin and Course of West Indian Hurricanes.** *Monthly Weather Rev.*, Vol. 43, 1915, No. 12, p. 611. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916. "In this paper the results obtained by Father Viñes and the data of the recent investigations carried out by the meteorologic service of the United States are made use of."]

—— **Porto Rico, Trade and Commerce of, Report for the Fiscal Year Ended June 30, 1914, on the.** 17 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5475. London, 1916. [The new Tariff Act passed by Congress in Oct., 1913, has effected a loss on the 1914 sugar crops estimated at about $10,000,000. Had the bill retained its original form and free sugar been admitted after May, 1916, a still more serious blow would have been dealt to the industry.]

—— **Trinidad and Tobago: Report for 1914-15.** 24 pp. Maps. *Ann. Colonial Repts. No. 877.* London, 1916.

VAN HEEKEREN, E. A. A. **Nederlandsch West-Indië in 1915.** *De Indische Gids,* Vol. 38, 1916, No. 2, pp. 190-196. [Review of economic development.]

Map of the island of Porto Rico. 1:120,000. Rand, McNally & Co., New York, [1915?].

SOUTH AMERICA

GENERAL

GOLDSMITH, P. H. **A Brief Bibliography of Books in English, Spanish, and Portuguese Relating to the Republics Commonly Called Latin American, with Comments.** xix and 107 pp. Index. The Macmillan Co., New York, 1915. 7 x 5.

We are awakening from our long-protracted ignorance of Latin America. The neglected countries to the south are becoming subjects of popular study. Bibliographies are in demand. For this "emergency" demand the above bibliography, despite its deficiencies, must have a certain value. There are a few serious omissions. There is no recognition of Colonel Church nor, one may add, of another eminent Amazonian explorer, James Orton. Spruce, who contributed so much to our knowledge of the Ecuadorian and north Peruvian *montaña,* is neglected, likewise Hudson, the naturalist. The Argentine-Chilean boundary disputes provoked much literature of value, including Holdich's "Countries of the King's Award"; yet this most readable book finds no place in the bibliography. From the unknown lands of Paraguay has come recent enlightenment at the hands of Barbrooke Grubb, but the bibliography does not note it nor the commentary on the Jesuit Missions of the adjacent territory, Graham's "A Vanished Arcadia." Raimondi is missing from the writers on Peru, and the necessarily short Ecuadorian list is impoverished by the omission of Whymper's "Travels Among the Great Andes of the Equator." There is no mention of Lloyd's series of Twentieth Century Impressions of South American countries; the volumes on Argentina, Brazil, and Uruguay have been published some time. One wonders over the omission of "Through the Brazilian Wilderness" and deplores, perhaps most of all, that of Walle's "Bolivia," both on account of its intrinsic merits and particularly in view of the exceedingly limited material available on modern Bolivia. The critical comments one need not take too seriously; some, however, are not inapt.

MARQUEZ B, ALBERTO. **Libro Internacional Sud-Americano.** 511 pp. Maps, ills. La empresa Zig-Zag, Santiago de Chile, 1916. 7½ x 10½.

This volume, eloquent indeed of South America, is another of the growing number of contributions to South American propaganda. The specific introduction for its general aim of a more widely known South America was achieved at the San Francisco exposition. The volume comprehends profusely illustrated sections of encyclopedic information on the individual countries, the authorization in each case being due to a member of the diplomatic corps.

—— **Quinine: A South American Gift to Humanity.** Ills. *Bull. Pan American Union,* Vol. 42, 1916, No. 1, pp 61-78. [See the note in this number, p. 375.]

REID, W. A. **Glimpses of South American Activities To-day.** Ills. *Bull. Pan American Union,* Vol. 42, 1916, No. 3, pp. 325-357.

Babson's map of South America for merchants and bankers [showing trade conditions]. 1:18,000,000. Babson's Statistical Organization, Wellesley Hills, Mass., 1915.

BRITISH ISLES

BABCOCK, W. H. **The Races of Britain.** *Sci. Monthly,* Vol. 2, 1916, No. 2, pp. 149-169.

DAVISON, CHARLES. **Earthquakes in Great Britain (1889-1914).** Maps, diagrs. *Geogr. Journ.,* Vol. 46, 1915, No. 5, pp. 357-374.

FARROW, E. P. **On the Ecology of the Vegetation of Breckland: I, General Description of Breckland and Its Vegetation.** Maps, diagrs. *Journ. of Ecology,* Vol. 3, 1915, No. 4, pp. 211-226. [''The heath district known as the 'Breck Country' lies in the low-rainfall area of East Anglia, its soil is sandy and porous, and it presents the nearest approach to continental steppe conditions to be found in Great Britain. . . . The dominance of heather (*Calluna vulgaris*), a plant of oceanic and sub-oceanic climates, separates the vegetation sharply from that of true continental steppe.'']

HOLMES, T. V. **On the Evidence as to the Geological Structure of Cumberland Bordering the Solway.** Map. *Geol. Mag.,* Decade 6, Vol. 2, 1915, No. 9, pp. 410-418.

FRANCE

—— **Bordeaux, Consular District of, Trade and Commerce of the, Report for the Year 1914 on the.** 54 pp. Map. *Diplomatic and Consular Repts.,* Ann. Series, No. 5525. London, 1915.

—— **Caffè, Il commercio del, all' Havre nel 1914-1915.** *Rapp. dei Agenti Diplom. e Consol.,* No. 23, Dec., 1915, pp. 11-12. Direz. Gen. degli Affari Commerciali, Minist. degli Affari Esteri, Rome.

COLETTI, S. **Condizioni di vita e di lavoro in alcuni bacini carboniferi francesi.** Diagr. *Boll. della Emigrazione,* Vol. 15, 1916, No. 1, pp. 3-51. Rome. [Report of an investigation by the author in his capacity of Italian emigration inspector.]

—— **Fierro en Normandia, El.** *Bol. Soc. Nacional de Minería,* No. 219, Vol. 27, 1915, pp. 419-427. Santiago, Chile.

GARÇON, PIERRE. **Le cours du Giffre et ses vallées.** Maps, ills. *La Montagne,* Vol. 11, 1915, No. 10-12, pp. 187-207. [Alpine valleys in the department of Haute Savoie.]

MOUSSU, G. **Le troupeau national français et la guerre.** Ills. *La Nature,* No. 2206, 1916, Jan. 8, pp. 17-21. [Cattle supply.]

SWITZERLAND OR THE ALPS

MICHEL, GASTON. **Verkehrskarte der Schweiz (Carte du Trafic de la Suisse).** 1:200,000. 47°50′-45°42′ N.; 5°50′-10°30′ E. 8 colors. With two insets: (1) [West-central Europe, showing the main lines of communication.] 1:4,000,000. 5 colors. (2) [Switzerland, showing administrative division of Swiss railroads. 1:900,000.] 7 colors. Engraved by Geograph. Anstalt Kümmerly & Frey, published by Geographischer Kartenverlag, both Bern, [1916].

An excellent map of the transportation lines of Switzerland, equally effective as a wall map to be used at a distance or as a desk map for close consultation. This result is obtained by reinforcing by bands of color the black lines which indicate railroads; while obliterating no details, this produces a bold network of lines which is readily visible at a distance. The ingenious symbolism of the map allows a wide range of expression. Gage and number of tracks are indicated by the kind of black line used; there are also separate symbols for tramway lines, cog-wheel railways, and that typically Swiss means of transportation, the *funiculaire.* The color bands, of a contrasting color, one on each side of a line, indicate by their width the amount of passenger and freight traffic respectively. Similarly, the freight and passenger traffic of a given station is indicated respectively by its symbol and the size of lettering of its name. Some eleven symbols are used for customs bureaus according to their receipts. The routes of the Swiss lake steamers are also differentiated according to the size of their traffic.

The base on which all this is shown is admirably suited to the purpose. Nowhere else has such intensive traffic developed in so rugged a region as in Switzerland, and it is therefore eminently fitting that relief is represented on the map. It must be subdued, however, in order not to mar the main theme; this has been attained by printing the topography in a grayish olive tone which conveys a good general impression of the relief. Closer inspection reveals the fact that the base is an excellent map in itself. Relief is shown by contours (interval 100 meters) and shading. The delicacy of line, especially evident on the glaciers, is the same as on good atlas sheets. Only Swiss cartography—its high development in itself a geographic response to its environment—could afford to use such excellent material as a mere by-product.

The density of the railway net in a zone between Lakes Constance and Geneva reflects the industrial development of this Alpine Foreland region in contrast with the enclosing mountain regions of the Jura and the Alps. The predominance of natural economic forces over political factors is also illustrated by the customs-exempt transitional areas of the ''Zone sarde'' and the ''Pays de Gex,'' tributary to Geneva, and the ''Zollausschlussgebiet von Samnaun und Sampuoir,'' the head of a mountain valley whose natural outlet is to the Tyrol. Another point that the map brings out well is the greater volume of the traffic on the St. Gotthard than on the Simplon route; it also shows that the number of passenger trains predominate over freight trains on the Simplon, while both categories are equal on the St. Gotthard. The latest trans-Alpine tunnel, the Lötschberg, opened in June, 1913, which connects Bern directly with Milan, and, before the war, afforded a more direct route than heretofore between Italy and northern France, Belgium, and England, is, of course, indicated.

The only defect is the absence of any indication as to the date used as a basis for the conditions represented.

Kreuzkam, Theodor. **Wirtschafts- und Verkehrsverhältnisse der Schweiz unter den Wirkungen des Krieges.** *Weltwirtschaft,* Vol. 5, 1915, No. 9, pp. 182-184. Berlin.

Germany

Dreyer, Johann. **Die Moore Pommerns: Ihre geographische Bedingtheit und wirtschaftsgeographische Bedeutung.** Maps, diagrs., ills., bibliogr. *Jahresbericht der Geogr. Gesell. zu Greifswald,* Vol. 14, 1913-14, pp. 1-319. Greifswald, 1914.

If the name of the region described in this treatise were omitted and one were to try to guess its whereabouts, the muskeg lands of northeastern Minnesota would fit equally well. In fact some of the photographs could very easily have been taken in this region. Hence the volume under consideration has a peculiar interest to the American.

The author presents a summation of the conditions in the moorlands of Pomerania, Germany, within 192 pages of text, three extensive tabulations covering 118 pages, a comprehensive bibliography that would seem to include all of the German literature on bogs or swamps, two maps, and nine photographs. Most of the data of years past have never before been presented in available form. The purpose of the author, however, was not merely to compile data, but to present the geographic influences effective in the reclamation of the vast swamp area of Pomerania and to show the possibilties of its economic development.

The theory of climatic and topographic influences upon the formation of a swamp is tested and applied. The writer asserts that the swamp constitutes an index to climatic conditions. It is argued that since a definite type of climate controls swamp building, geologic records that show the former existence of swamps thereby give the key to some of the climates of the past.

The physical and chemical composition of the swamp lands in various stages as found in different parts of the province is given in detail. This should prove of value to those especially interested in the cultivation of similar lands. Of equal value is the discussion of the results of practical work done up to date and the methods whereby success has been attained.

Stettin's supply of vegetables is grown upon these lands. The raising of truck-garden products and the use of the remainder of the land for pasturage to supply the meat and dairy products offer a most promising future. The extraction of peat for fuel, the derivation of ammonia, and the use of certain parts of the soil for medicinal baths are among the industrial uses mentioned. The author concludes that in addition to the products to be derived from swamp lands, the effect of their cultivation upon the elimination or reduction of disease is worth much in itself. Eugene Van Cleef.

Hecht, H. H. **The Motor Routes of Germany Through North-Eastern France and Holland, to the Rhine, the Moselle, the Black Forest, the Thuringian Forest, the Taunus, and Bavaria.** Edited by Gordon Home. xxiv and 456 pp. Maps, ills., index. A. & C. Black, London, 1914. 5s. 8½ x 5½.

A very complete handbook for motorists who, before the war, designed to tour Germany. The route maps and town plans are simply and clearly drawn and are easy to understand. Brief historical information about the different places is given. A large and well-executed motor map of Germany is added. The book leaves little to be desired in the way of a practical guide for actual use by the experienced motorist.

DAVID H. BUEL.

KRÜGER, GUSTAV. **Über Sturmfluten an den deutschen Küsten der westlichen Ostsee, mit besonderer Berücksichtigung der Sturmflut vom 30./31. Dezember 1904.** Map, diagrs. *Jahresbericht der Geogr. Gesell. zu Greifswald,* Vol. 12, 1909-10, pp. 195-294. Greifswald, 1911.

The Baltic Sea, separated as it is from the North Sea by the narrow passages of the Belts, experiences very slight changes of level due to tidal forces. Like the nearly enclosed Albemarle and Pamlico Sounds, its greatest variations of surface level result from the action of winds in piling water up against the low bordering coasts. Southerly winds drive the water into the Gulf of Bothnia, giving high water around its borders and low water along the shores of southern Sweden and northern Germany. With northerly winds, the condition is reversed, and Trelleborg and Malmö, together with many of the German coast cities, find their streets invaded by the rising waters. The same wind which raises the water level drives high waves against exposed portions of the flooded coasts, enormously increasing the damage done by these "storm tides," as they are commonly called.

Gustav Krüger has performed a useful service in publishing a critical survey of the more important reports on such of these storm tides as have affected the German coast from the earliest trustworthy description of a storm in the year 1044, to the disastrous flood of December, 1904. On the basis of this study of the literature, Krüger presents a chronological table of 79 recorded storm tides and finds that on an average six important disasters of this nature occur in each century. The data for the last three centuries are most complete and permit the author to distinguish periods of frequent storm tides, alternating with periods in which their occurrence is rare. An attempt is then made to correlate the storm-tide period with the Brückner cycle of wet and dry climatic variations, and it is pointed out that the Brückner dry periods of 1781-1805 and 1856-1870 coincide closely with the frequent storm-tide periods 1784-1801 and 1855-1874 respectively. Krüger concludes that periods of frequent storm tides can in general be shown to agree with Brückner dry periods and vice versa. The fact that the period of storm-tide frequency 1736-1750 coincides with the *wet* period 1736-1755, while the frequency period 1820-1825 occurs in the *wet* period 1806-1825, is in apparent disagreement with the author's conclusion.

The final part of Krüger's paper is devoted to an elaborate discussion of the great storm-tide of December 30-31, 1904, including a review of previous descriptions of this event. It appears that westerly winds prepared the way for the coming disaster by driving much water from the North Sea into the Baltic, thereby giving an abnormal height to the surface of the latter. Northeast winds then piled the water up against the low coast of northern Germany to a height in places eight feet above mean water level. The details of areas flooded, coast margins eroded, and artificial structures demolished bring vividly to mind the similar destruction wrought along the New Jersey coast by the great storm of January 4, 1913. D. W. JOHNSON.

RUSSIA

WILLIAMS, H. W. **Russia of the Russians.** ix and 430 pp. Map, ills., index. Charles Scribner's Sons, New York, 1915. $1.50. 7½ x 5½.

An elevated and scholarly description of the development and present state of Russia and Russian institutions. At the very start the importance and influence of the geographical factor is recognized. A striking contrast is drawn between an island-dwelling people, like the British, and a plains-dwelling people, such as the Russians, and the whole course of Russian history is shown to be the outcome of life on a plain, increasing and expanding until the barriers of sea and mountain are reached. The account is a candid and unbiased statement of facts as they are in Russia—its bureaucracy and its constitution, its press, the church and the people, its literature, music, theater, art, and architecture, its peasants and landed proprietors, and finally its great city, now known as Petrograd. A chapter on the *intelligentsia* is worthy of note. In this, the educated class, Russian idealism and devotion to the altruistic service of humanity find their highest expression. DAVID H. BUEL.

BIENAIMÉ, GEORGES. **La Pologne.** *La Géogr.,* Vol. 30, 1914-15, No. 5, pp. 337-358. Paris.

BORISSOV, A. **Amélioration des voies ferrées dans le nord de la Russie.** *Bull. Soc. Géogr. Comm. de Paris,* Vol. 37, 1915, No. 10-12, pp. 305-326. [Deals with the

Viatka-Kotlas, Vologda-Archangel, and Petrograd-Kola routes, all shown on the map in the February *Review*, p. 130, and the last two described in the article which it illustrates.]

—— **Cotton Industry in 1915, Russian.** *Commerce Repts.*, 1916, No. 48, pp. 812-813. Bureau of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C., 1916. [Reprinted from the *Journ. Russian-Amer. Chamber of Comm.*, Nov., 1915.]

—— **Odessa, Consular District of, Trade of the, Report for the Year 1914 on the.** 80 pp. Map. *Diplomatic and Consular Repts.*, Ann. Series, No. 5544. London, 1915.

—— **Russian Commercial Ports.** *Commerce Repts.*, Ann. Series, 1916, No. 42. pp. 718-719. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C. [From the *Journ. Russian-American Chamber of Comm.*, Dec., 1915.]

—— **Ukraine, The Cry of.** Map. *Amer. Rev. of Reviews*, Vol. 53, 1916, No. 4, pp. 485-486. [Based on an appeal published by the National Ukrainian Association pleading the racial unity of the Ukrainians, at present politically divided as Little Russians in Russia and Ruthenians in Galicia and northern Hungary.]

AUSTRIA-HUNGARY

GAYDA, VIRGINIO. **Modern Austria: Her Racial and Social Problems, with a Study of Italia Irredenta.** [Abridged translation, from the second edition of the Italian original, by Z. M. Gibson and C. A. Miles.] 350 pp. Index. Dodd, Mead & Co., New York, 1915. $3. 9 x 5½.

None but an Italian conscious of the intertwining of his country's history with that of Austria and mindful of his countrymen's liberation from the Austrian yoke could have interpreted the twilight of the Austro-Hungarian monarchy with such lucidity. By the spirited rendering which makes the work accessible in an English dress the translators have extended their good services to two hemispheres.

Passing in review the various Austrian nationalities, the author not unnaturally dwells longer on the unredeemed portions of his country. The scientific foundation of the peopling of the Trentino by Italians is correctly stated to be a result of the prolongation of Italian valleys north of the Italo-Austrian frontier. On the other hand, to pretend that Istria with its "Italian population" should belong to Italy is to affirm the unwarranted, since the peninsula is peopled mainly by Slavs, its western edge alone having been settled by Italians. A distinct loss in the value of the work is incurred by occasional slips of this character.

The book stands somewhat apart from publications dealing with the same subject in that it gives an unusually brilliant exhibition of the peculiarities of Austro-Hungarian social life which owe their distinctiveness to the forcible mingling of peoples of incompatible temperament.

DE LUCCHI, GUIDO. **Trentino e Tirolo (Aprile 1914).** 82 pp. [*Boll.*] *Direz. Gen. degli Affari Commerc.*, 1915, No. 16. Minist. degli Affari Esteri, Rome.

[Five maps in one:] 1, Ethnographical map of Austro-Italian frontier, 1:2,000,000; 2, The western Trentino, physical, 1:1,000,000; 3, Present and proposed frontiers in the Trentino, 1:1,000,000. 4, Present and proposed frontiers north of Trieste, 1:1,000,000; 5, The western frontier of Montenegro, 1:2,000,000. Accompanies "The Southern Frontiers of Austria" by D. W. Freshfield, *Geogr. Journ.*, Vol. 46, 1915, No. 6.

BALKAN STATES, INCLUDING RUMANIA

NEWBIGIN, M. I. **Geographical Aspects of Balkan Problems in Their Relation to the Great European War.** ix and 243 pp. Maps. G. P. Putnam's Sons, New York, 1915. $1.75. 8½ x 5½.

This timely volume by the editor of the *Scottish Geographical Magazine* is intended "to summarize those geographical facts which made the Balkan Peninsula the potential storm-center of Europe." Physical, political, and historical geography are laid under tribute to broaden the reader's acquaintance with the complicated issues which render the Balkan "problem" so difficult from every point of view. The folded mountains of the western coast, which shut off the central and eastern states from free communication with Italy, the central upland of Rhodope and the important furrows formed by the Morava-Vardar and Morava-Maritza valleys, and the various rivers characterized by "unnatural," right-angled bends, are discussed at length, and their effects on the migrations, political development, and racial peculiarities of the people considered. A chapter is devoted to the past history and probable future development of the main trade routes of the peninsula, in which emphasis is laid on the significant fact that both the ancient Roman roads and the modern railways were built to cross the region rather than to develop it. Special attention is given to the policies of Austria and Turkey in the Balkans, and it is shown that these policies have been largely affected by the physical features of the region. The influence of climate is not overlooked, and the agricultural practices of the different states are compared. Each chapter is followed by a list of references to the literature of the subjects discussed; and the book is illustrated by several text maps and an excellent orographical map in colors, most of which have already appeared with the author's earlier brief article on "The Balkan Peninsula: Its People and Its Problems" in the *Scottish Geographical Magazine* for June, 1915.

It is in her discussions of physiographic changes in the Balkan Peninsula that the reader must hesitate to follow the author with full confidence. In particular, the treatment of drainage modifications in Chapter V is open to criticism, since it is largely based on two erroneous assumptions: that the submergence of the lower part of a river by increasing the average steepness of its course increases the erosive power of its headwaters; and that a sharp elbow turn in a river ordinarily means that river capture has taken place. The series of captures described by the author are in the highest degree improbable. However, such defects as these may be charged not so much to original mistakes of the author as to a failure in discriminating between probable and improbable theories as presented by other workers in the Balkan field. As a whole the book is a valuable summary of many important phases of Balkan geography.

D. W. JOHNSON.

ITALY

MAGRINI, GIOVANNI. **Studi fitogeografici sulla laguna di Venezia.** viii and 348 pp. Index, bibliogr.; separate volume of tables. *Ufficio Idrografico Pubbl. N. 54.* R. Magistrato alle Acque, Venice, 1913.

The Italian Hydrographic Office has published in this volume an elaborate study of the vegetation of the coast of the Adriatic Sea from the mouth of the Tagliamento to that of the Adige. A full and well-illustrated description is given of the littoral, lacustrine, and subcontinental portions of the area. This primary subdivision is made on the basis of physiography rather than vegetation, for in each area is to be found a series of communities, from dunes or marshes to arborescent or shrubby vegetation. The descriptive treatment is chiefly floristic, and no attempt is made to work out the successional phenomena involved. The littoral area embraces moving and stable dunes, meadows, and woods of *Quercus ilex* and the introduced *Pinus pinea.* The lacustrine area presents conditions varying from moist to dry and from saline to fresh and is mainly covered by halophytic flats or fresh marshes. The subcontinental area exhibits several types of marsh and a low woodland of *Quercus pedunculata* and other broad-leaved trees. Much space is devoted to the discussion of the broader aspects of work of this character, as for example the general relation of environmental conditions to plant activity, the "adaptive" features of plant structure, variability, polymorphism, etc. There is a full account of the history of botanical work in the vicinity of Venice, a list of the flora with habital notes, and a lengthy bibliography of papers on the ecology of dunes and littoral and palustrine areas.

This work has been done with such thoroughness and such adequate attention to its general bearings that subsequent investigators of similar areas in southern Europe will be free to make their work of a more intensive character. FORREST SHREVE.

—— **Annuario Statistico Italiano: Seconda Serie, Vol. IV: Anno 1914.** xii and 502 pp. Maps, diagrs., index. Direz. Gen. della Statistica e del Lavoro, Rome, 1915. 10½ x 7½. [The fourth volume of the revised series. Contains under a single cover the statistical data collected by the various Italian government bureaus. Tables often accompanied by analytical notes. Valuable information on Italy's colonial domain.]

CORBINO, EPICARMO. **L'emigrazione italiana dopo la guerra, e la politica relativa.** *Riv. Colon.*, Vol. 10, 1915, No. 11, pp. 654-669. Ist. Colon. Italiano, Rome.

DU RICHE PRELLER, C. S. **The Moraine Walls and Lake Basins of Northern Italy.** Maps, diagr. *Geol. Mag.*, Decade 6, Vol. 2, 1915, No. 9, pp. 403-410.

DU RICHE PRELLER, C. S. **The Carrara, Massa, and Versilia Marble District.** Map, diagrs. *Geol. Mag.*, Decade 6, Vol. 2, 1915, No. 12, pp. 554-565.

—— **Emigrazione italiana per l'estero avvenuta nell' anno 1914.** *La Geogr.*, Vol. 3, 1915, No. 7-10, pp. 375-378. Novara.

GORTANI, MICHELE. **La frana di Clauzetto (marzo-aprile 1914).** 28 pp. Map, diagrs., ills. *Ufficio Idrografico Pubbl. N. 65.* R. Magistrato alle Acque, Venice, 1915. [Describes an earth-slip in the foothill region of the Venetian Alps. The geological maps and profiles and the photographs illustrate conditions before and after the slip.]

GRAZIA, PAOLO DE. **Frane recenti in Basilicata.** Ills. *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 319-329. Novara. [Recent earth-slips in southern Italy.]

LEONE, ANDREA. **A proposito di alcune recenti guide dell' Ossola.** *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 330-337. Novara. [Guide books on the Alpine valley forming the Italian adit to the Simplon Tunnel route.]

MAGRINI, GIOVANNI. **Superficie dei bacini montani della regione veneta.** 51 pp. Maps. *Ufficio Idrografico Pubbl. N. 62.* R. Magistrato alle Acque, Venice, 1914. [Planimetric measurements of the mountain sections of the river basins of the province of Venice, based on the Italian topographic map in 1:100,000. The basins and their subdivisions are outlined on transparent maps in 1:200,000 accompanying the report which may be superposed for purposes of comparison on the sheets of the Italian topographic map on that scale.]

MAGRINI, GIOVANNI. **La segnalazione del tempo per il porto di Venezia.** 19 pp. Diagrs., ills. *Ufficio Idrografico Pubbl. N. 57.* R. Magistrato alle Acque, Venice, 1915.

—— **Migrazioni periodiche interne (anni 1910-1911).** *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 378-381. Novara.

POLI, ASER. **Per la pronunzia dei nomi geografici italiani.** *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 350-354. Novara.

TARAMELLI, TORQUATO. **Le montagne dove si combatte.** Ills. *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 294-313. Novara. [Alpine battlefields of the Italo-Austrian frontier.]

—— **Uva e vino: produzione media del quinquennio 1909-1913.** *La Geogr.,* Vol. 3, 1915, No. 7-10, pp. 371-375. Novara.

ZAPPULLA, C. N. **Le Eolie.** Bibliogr. *L'Esplorazione Commerc.,* Vol. 30, 1915, No. 10-11, pp. 365-377. Milan. [The Lipari, or Aeolian, Islands.]

AFRICA

GENERAL

ANKERMANN, BERNHARD. **Verbreitung und Formen des Totemismus in Afrika.** Map. *Zeitschr. für Ethnologie,* Vol. 47, 1915, No. 2-3, pp. 115-180. Berlin. [With a map of Africa showing the distribution of totemism.]

MIGEOD, F. W. H. **Notes on West Africa according to Ptolemy.** Diagr. *Journ. African Soc.,* No. 56, Vol. 14, 1915, pp. 414-422. [With a note by Sir Harry H. Johnston, pp. 423-426.]

QUESNEL, G. **Les Allemands en Afrique.** *Soc. Languedocienne de Géogr.,* Vol. 38, 1915, No. 3, pp. 159-193. Montpellier.

CONGO BASIN AND LOWER GUINEA

—— **Angola Portoghese: Note su una regione dell' altipiano di Benguella.** *Rapporti dei RR. Agenti diplomatici e consolari N. 16,* pp. 1-5. Direz. Gen. degli Affari Comm., Minist. degli Affari Esteri, Rome, August, 1915.

DINIZ, FERREIRA. **Protecção e assistencia ás populações indigenas da provincia de Angola.** *Bol. Soc. de Geogr. de Lisboa,* Vol. 33, 1915, No. 7-8, pp. 274-319. [A social and economic study.]

PEREIRA DO NASCIMENTO, J. **La colonisation du plateau sud d'Angola.** *Bol. Soc. de Geogr. de Lisboa,* Vol. 33, 1915, No. 7-8, pp. 253-273; No. 9-10, pp. 351-355. [Of the 40,000 emigrants annually leaving Portugal 90 per cent go to Brazil. Many from Madeira and the Azores prefer the United States (Boston and San Francisco); the remainder is directed to the Hawaiian Islands, Trinidad, and British Guiana. So far Portugal has failed to establish an emigration current to her African colonies. The suitability of the Benguella plateau for such a purpose is favorably considered in this article.]

SCHWETZ, J. **Preliminary Note on the General Distribution of *Glossina Palpalis, Rob-Desv.,* in the District of Lomami, Belgian Congo.** Map. *Annals of Tropical Medicine and Parasitology,* Vol. 9, 1915, No. 4, pp. 513-526. Liverpool. [On the conditions of moisture and vegetation determining the distribution of the tsetse-fly.]

EAST AFRICA

HOBLEY, C. W. **The Alleged Desiccation of East Africa.** Map, diagr., ills. *Journ. East Africa and Uganda Nat. Hist. Soc.*, Vol. 5, 1916, No. 9, pp. 4-16. (Reprinted, without statement to that effect, from *Geogr. Journ.*, Vol. 44, 1914, pp. 467-477.)

Northward of Mombasa the East African coast is thickly studded with ruins of age and origin unknown. By the author of the above paper they are considered to represent a colonizing venture on the part of the Himyaritic Arabs at a period of greater rainfall when the hinterland of this part of British East Africa and Somaliland enjoyed better facilities for stock-raising. The objective of the coast settlements would then be trading between this richer hinterland and the densely peopled *Arabia Felix.* The paper also takes up a short discussion of evidences of climatic change in geological time. It was contributed in response to Prof. J. W. Gregory's survey of evidence for world desiccation, "Is the Earth Drying Up?" (*Geogr. Journ.*, Vol. 43, 1914).

SCHLIKKER, BERNHARD. **Beitrag zu den Regenverhältnissen im küstennahen Gebiete von Deutsch-Ostafrika.** Inaugural-Dissertation . . . Univ. Münster. 42 pp. Maps, diagrs. E. S. Mittler & Sohn, Berlin, 1915. 12 x 9½.

German East Africa is a region for which climatic data have been accumulating with remarkable rapidity in the last few years. Von Danckelmann, Maurer, and others have already given us valuable reports on its climate. Particular interest attaches to the rainfall, because of the very striking differences which have been found to exist in the amounts of precipitation in different parts of the area. There are all gradations, from a dry steppe to tropical abundance of vegetation. The available rainfall data for the littoral portion of German East Africa (east of 36½° E.) are selected and reduced in this thesis, and on them is based a new rainfall map (listed below), which differs in some respects from the earlier maps of Fitzner (1907) and Maurer (1900). The maximum mean annual rainfall exceeds 2000 mms. (78.74 ins.) on some of the higher elevations, and the minimum is below 750 mms. (29.53 ins.). The six months December to May (or November to April) are the rainiest part of the year. The district thus belongs to the southern hemisphere régime of a summer (high sun) rainfall maximum. The variations in the annual amounts are considerable over the whole area. The results presented in Doctor Schlikker's monograph are acknowledged to be preliminary, and as such will doubtless be subject to more or less modification in future years, as more reliable data, covering longer periods, become available for discussion. Nevertheless, this new rainfall map and the critical discussion accompanying it will for a good many years, at any rate, remain the standard publication for this portion of eastern Africa.

R. DEC. WARD.

Niederschlagskarte des östlichen Deutsch-Ostafrika. Entworfen v. Bernhard Schlikker. 1:2,000,000. Accompanies "Beitrag zu den Regenverhältnissen im küstennahen Gebiete von Deutsch-Ostafrika," von B. Schlikker, E. S. Mittler & Sohn, Berlin, 1915. [See review immediately above.]

SOUTH AFRICA

CALDECOTT, W. A. **Some Features of the Rand Gold Mining Industry.** *South African Journ. of Sci.*, Vol. 12, 1915, No. 4, pp. 113-123. Cape Town.

—— **Commerce de la France et de ses colonies avec l'Afrique du Sud britannique, Note sur le.** *Bull. Écon. du Gouv. Gén. de la Colon. de Madagascar et Dépend.*, Vol. 15, 1915, No. 1, pp. 129-139. [In 1913, a normal year, total trade between British South Africa and France and the French colonies was less than 1 per cent.]

FULLER, C. **Termite Economy.** *South African Journ. Sci.*, Vol. 12, 1915, No. 2, pp. 60-64. Cape Town. [The author claims that the "park-formation" in South Africa is entirely due to termite activities.—Entry taken from review in *Rev. of Applied Entomology, Ser. A: Agricultural,* Vol. 3, 1915, Part 12, pp. 756-757, Imperial Bureau of Entomology, London.

PÉRINGUEY, L. **The Bushman as a Palaeolithic Man.** *Trans. Royal Soc. of South Africa,* Vol. 5, 1915, Part 3, pp. 225-236. Cape Town.

ASIA

TURKEY IN ASIA, ARABIA, CAUCASIA, IRAN

JASTROW, MORRIS, JR. **The Civilization of Babylonia and Assyria: Its Remains, Language, History, Religion, Commerce, Law, Art, and Literature.** xxv and 515 pp. Map, ills., index. J. B. Lippincott Co., Philadelphia and London, 1915. 9½ x 6½.

This survey of the ancient civilization of a natural region has the advantage of being presented by a fully qualified worker. It shows in the main that human progress in Mesopotamia has traveled northwards along the channels provided by its great twin river system. Copious translations of tablets bring the daily life of the Babylonians and Assyrians within the reader's range of vision. The conditions under which the farmers of Babylon worked their artificially irrigated lands or those under which the trader of Nineveh carried on his commerce are made clear. Social conduct in the great cities is revealed. Tenure of real estate, laws regarding personal property, marriage, and divorce, worship of different cults in their respective sanctuaries, are so many fragments which the author has assembled in the endeavor to create a mosaic of the complex life formerly led by the dwellers on the banks of the Tigris and Euphrates.

The relation of the subject to time is presented far more satisfactorily than that to space. True, some archeologists might have preferred to see the date of the Hammurabi period set at a century earlier than *circa* 2000 B. C., as given on page 54. But the last word in both Babylonian and Assyrian chronology has not yet been stated. In dealing with the position of these civilizations on the map, however, the facts are not quite as uncertain. It is doubtful whether the physical conditions prevailing at the time in which we obtain these early glimpses of political and social conditions have changed appreciably. The confinement of culture to the truly Mesopotamian area, its backward state in the desert on the west or toward the mountains on the east are facts which influenced Babylonian and Assyrian civilization, especially the latter. The northerly spread of progress can be explained geographically with these considerations in mind. That is why the lack of a preliminary description of the aspect of the land on which this remarkable evolution has taken place is to be deplored. That is also why we think that the liberality which has presided over the selection of the illustrations could have been extended most advantageously to a choice of maps on which the physical foundations of Babylonian and Assyrian history would have been represented.

MANCHURIA, KOREA, JAPAN

CLEMENT, E. W. **A Short History of Japan.** x and 190 pp. Map, ills., index. University of Chicago Press. Chicago, 1915. $2.50. 8 x 5. [An appendix entitled ''Physiography'' contains a conventional enumeration of geographic elements.]

MUÑOZ, CARLOS. **Memoria anual del cónsul general de Chile en el Japón correspondiente a 1914.** *Bol. de Relaciones Exteriores,* No. 59, 1915, August, pp. 1-71, Santiago, Chile.

—— **Nagasaki, Trade of, Report for the Year 1914 on the.** 21 pp. Map. *Diplomatic and Consular Repts.,* Ann. Series, No. 5535. London, 1915.

—— **Yokohama, Consular District of, Trade of the, Report for the Year 1914 on the.** 25 pp. Map. *Diplomatic and Consular Repts.,* Ann. Series, No. 5545. London, 1916.

CHINA

—— **Pakhoi, Consular District of, Trade of the, Report for the Year 1914 on the.** 8 pp. Map. *Diplomatic and Consular Repts.,* Ann. Series, No. 5554. London, 1916.

—— **Port Trade Statistics and Reports: Frontier Ports (Lungchow to Yatung) and Kiaochow Statistics.** 86 pp. *China Maritime Customs Statist. Series Nos. 3 and 4* (*Returns of Trade and Trade Repts.*), 1914, Part 2, Vol. 5. Shanghai, 1915.

—— **Trade, Analysis of Foreign: Exports.** 443 pp. *China Maritime Customs Statist. Series Nos. 3 and 4* (*Returns of Trade and Trade Repts.*), 1914, Part 3, Vol. 2. Shanghai, 1915.

INDIA

FRIPP, M. **Irrigation in India, With Especial Reference to Influence on Topography.** *Geogr. Teacher,* No. 42, Vol. 8, 1915, Part 2, pp. 118-124. London. [Abstracted in the April *Review,* p. 302.]

HAYDEN, H. H. **The Mineral Production of India During 1914.** *Records of Geol. Surv. of India,* Vol. 45, 1915, Part 3, pp. 158-208.

MARTINEAU, ALFRED. **Les origines de Mahé (de Malabar).** Maps. *Rev. de l'Histoire des Colonies françaises,* Vol. 3, 1915, Quart. 1, pp. 5-98; Quart. 2, pp. 129-234; Quart. 4, pp. 431-536. Paris.

SMITH, J. A., JOSE DE OLIVAREZ, AND J. O. LAING. **British India: Calcutta, Madras, Karachi.** 32 pp. *Suppl. to Commerce Repts.,* Ann. Series, 1915, No. 50a. Bur. of Foreign and Domestic Commerce, Dept. of Commerce, Washington, D. C.

Volterra, E. T. **L'India e la penetrazione economica italiana.** *Riv. Colon.*, Vol. 10, 1915, No. 11, pp. 633-653; No. 12, pp. 709-724. Ist. Colon. Italiano, Rome.

[Topographic map of India]. 1:253,440. (a) Without altitude tints. Sheets: 46L; 47M; 48L; 54I, J, M; 55B, C, D, F, G, K, L, O; 56B, C, J; 63A, C, D, F, G, H, K, L; 64D, O, P; 65A, K, L, M, N, O; 74A, B, I; 85M, 94F. (b) With altitude tints. Sheets: 39J; 43C; 48L; 55L; 85M; 94F. Survey of India, Calcutta, 1913-15.

India and Adjacent Countries. 1:1,000,000. Sheets: 18; 65 and part of 66; 92. Survey of India, Calcutta, 1913-15.

AUSTRALASIA AND OCEANIA

Australia, New Zealand

Duncan, Norman. **Australian Byways.** 294 pp. Ills. Harper & Brothers, New York, 1915. $1.75. 8½ x 5½.

A British traveler's story of his tour from England, through the hinterland of Australia, thence to Papua, Thursday Island, and Singapore. To him sampans "sob" and lighthouses are "sun-soaked." The personal peculiarities of his fellow travelers are described in a breezy, familiar vein. The most interesting chapter is taken up with an account of the unusual powers of the blacktrackers, or bushmen, who trace criminals by their footprints, in a way that would excite the envy of a Sherlock Holmes. They are said to discern from the traces of the feet of their quarry not only the direction of flight but the height, weight, age, and physical condition of the person they are tracking. The exploits of the Queensland Mounted Police parallel the deeds of daring of the Northwest Mounted Police of Canada. The book makes entertaining reading for those who are fond of works of travel written in a conversational style.

David H. Buel.

Taylor, Griffith. **The Climatic Control of Australian Production.** 32 pp. Maps, diagrs. *Commonwealth Bur. of Meteorol. Bull. No. 11.* Melbourne.

In view of the postponed publication of the Federal Atlas of Australia the editor-elect has here brought together some of the important data in hand for a study of the distribution of three leading Australian products—cattle, sheep, and wheat. From the isothermal and isohyetal relations of the present distribution—shown in map form—in the several provinces future possibilities are deduced. In the better developed eastern areas the principal control of cattle appears to be the 20-inch isohyet. Much of the east, at least of the southern portion, has attained its maximum capacity for cattle, but vast areas, climatically suitable, await development in the Northern Territory and the Kimberley district of Western Australia. Sheep, in general occupying areas complementary to cattle, find optimum conditions in regions with a rainfall of 15 to 20 inches in Queensland, somewhat higher to the south. The southwestern portion of Western Australia, analogous in many respects to the great sheep-grazing fields of New South Wales, offers the greatest prospects for expansion. In respect of wheat the 10-inch isohyet for the growing season exercises the primary control, with 20 or 15 inches to 10 inches as the optimum rainfall over most of the country. Of virgin regions still remaining, parts of New South Wales and Western Australia are suitable for cultivation similar to that at present obtaining. So far all the wheat grown is harvested in summer, and the temperature of the growing season appears to have been an important control. Climatic comparison with wheat-producing regions in the United States (Texas) and northern India show respective likeness with the Brisbane district of Queensland and the east-central part of that province. By the introduction of new varieties, the durum wheat, for example, northward extension of the wheat-growing zone seems possible.

Ball, L. C. **The Einasleigh Freehold Copper Mine, N. Q.** 31 pp. Maps, diagrs., ills. *Queensland Geol. Surv. Publ. No. 246.* Brisbane, 1914.

Dixon, Russell. **Index (No. 5) to Publications Nos. 215 to 226 (Vol. 3 of New Series).** 52 pp. *Geol. Surv. of Queensland Publ. No. 227.* Brisbane, 1914.

Fraser, Malcolm. **Statistics of the Dominion of New Zealand for the Year 1914, Vol. 2: Shipping and Trade.** xx and 472 pp. Index. Wellington, 1915.

Godfrey, J. R. **Report upon the Ardlethan Tinfield.** 77 pp. Diagrs. *New South Wales Geol. Surv. Mineral Resource Series No. 20.* Sydney, 1915.

Hutchins, D. E. **The Forests of Australia.** *Trans. Royal Scottish Arboricultural*

Soc., Vol. 30, 1916, Part 1, pp. 34-43. Edinburgh. [From an article contributed to the *Melbourne Argus* by the author.]

QUAYLE, E. T. **Relation Between Cirrus Directions as Observed in Melbourne and the Approach of the Various Storm Systems Affecting Victoria.** 27 pp. Maps, diagrs. *Commonwealth Bur. of Meteorol. Bull. No. 10.* Melbourne, 1915. [Abstracted in this number, pp. 376-377.]

SAINT-SMITH, E. C. **Geology and Mineral Resources of the Stanthorpe, Ballandean and Wallangarra Districts (with Notes on the Silver Spur Mine, Texas), Southern Queensland, 1913.** 165 pp. Maps, diagrs., ills. *Queensland Geol. Surv. Publ. No. 243.* Brisbane, 1914. [From the inception of mining operations in 1872 to the end of 1912 the Stanthorpe district accounted for 36.7 per cent of the total tin output of Queensland.]

—— **Water Supply and Irrigation in Australia.** *Geogr. Journ.*, Vol. 46, 1915, No. 5, pp. 380-384.

Geological map of New South Wales. 1:1,000,000. Department of Mines, Sydney, 1914.

POLAR REGIONS

ANTARCTIC

PRIESTLEY, R. E. **Antarctic Adventure: Scott's Northern Party.** 382 pp. Maps, diagrs., ills., index. E. P. Dutton & Co., New York, 1915. $5. 9 x 5½.

This is the story of Captain Scott's northern party on his last expedition to Antarctica. It numbered six men under the leadership of Commander V. L. A. Campbell, R. N. It was sent from Scott's base camp at Ross Island in January, 1911, to Cape Adare, over 400 miles north, to make geological, zoölogical and meteorological studies there and along the coast to the south. The book is purely popular, with only occasional references to the scientific work, all details of which were reserved for the scientific reports of the expedition.

The author was the geologist and meteorologist. His book gives vivid impressions of the environment, including animal life. It is good reading, though too prolix in its chronicle of the most trivial details of personal relations and ordinary incidents during their first happy and prosperous year.

But there is nothing commonplace in the history of the second year, farther south near Evans' Coves, where the six men, through the darkness of the winter night, fought for bare life in such misery as explorers have seldom met. They lived through it, though reduced to half their weight, and sledged south to the main camp two years after they had left it; and the first news they heard was of Scott's tragic death.

In January, 1912, the *Terra Nova* took them south to the second field of their work within view of Mt. Nansen. The vessel was to return for them in about a month but she never came. In fact, she made three attempts to reach them but was stopped by heavy pack ice and finally went on to Australia. The men had neither food nor clothing to meet another winter but they had to face the situation. Their supplies were nearly exhausted and, when winter came, they had not succeeded in killing enough seal and penguin to last through.

They tunneled a large snowdrift, and in this hole in the snow, walled in with ice blocks and biscuit boxes, they existed for seven months. Their cave was nine by twelve feet in size. Two tents were used as cook rooms, for it was not safe to heat the cave. Blubber, with unraveled rope for lampwick, supplied dim illumination. Soon after darkness came they were reduced to half rations, with a biscuit apiece daily and an occasional bit of sugar, chocolate, or cocoa. Living almost altogether on a meat diet, they suffered from the lack of carbohydrates but discovered that seal liver supplied this need to some extent. The smokers suffered much when their supply of tobacco gave out.

The party was finally reduced to one meager meal a day and was facing starvation when, on May 6, the hunters had the great good fortune, in the dim light, to kill four emperor penguins that were in splendid condition and dressed over eighty pounds of meat each. This supply of good food saved their lives. They much preferred penguin to seal meat, but it was the latter that pulled them through, for three large seals came next into the larder, and there was meat and blubber till plenty of game came with the sunrise in August. The men were their own relief party. They hauled a sledge down the coast and rejoined their comrades at Ross Island. They were not able to do any scientific work in their second year.

CYRUS C. ADAMS.

Seward, A. C. **Antarctic Fossil Plants.** 49 pp. Maps, ills. *British Antarctic ("Terra Nova") Expedition, 1910, Natural History Report: Geology,* Vol. 1, No. 1. British Museum (Natural History), London, 1914. 6s. 12½ x 9½.

The possible avenues by which floras have been distributed over the globe, not only in past geologic time but at the present day, have always been matters of extreme interest. From known facts of distribution it has long seemed that the vast Antarctic region must hold the key to much of this history. On this point Darwin wrote: "Nothing is more extraordinary in the history of the vegetable kingdom, as it seems to me, than the apparently very sudden or abrupt development of the higher plants. I have sometimes speculated whether they did not exist somewhere during long ago on an extremely isolated continent, perhaps near the South Pole." The recent revival of activity in Antarctic exploration has supplied data which in part at least confirms these conjectures. Thus, the Swedish expedition discovered an extensive Jurassic flora on Graham Land, and this suggests an avenue by which this widespread flora reached from Africa through Gondwana Land (Antarctica) to the South American continent. Professor Seward's report on the material secured by the Scott parties carries the presence of fossil plants very much farther south than ever before known. They are from five localities between the Priestley Glacier, 74° S., to Buckley Island, 85° S., the latter less than 350 miles from the Pole. The rocks in which the plant remains were found have been designated the Beacon Sandstone and extend from Mt. Nansen to at least as far south as 85°, or a distance of 700 miles; it has a maximum thickness of over 1,500 feet and is composed of fine-grained sandstones and shales with occasional coal seams and carbonaceous streaks. F. H. Knowlton.

MATHEMATICAL GEOGRAPHY

Surveying and Geodesy

Davis, R. E., and W. H. Rayner. **Unusual Methods Simplify Topographic Survey of Rough Wooded Area.** Diagrs. *Engineering Rec.,* Vol. 73, 1916, No. 10, pp. 316-317. [Describes surveying a tract in Missouri on the scale of 1:600 with 2-ft. contours at a cost of $3.34 per acre.]

Joly, J. **On a Method of Estimating Distances at Sea in Fog or Thick Weather.** Diagr. *Proc. of the Royal Soc.,* Series A, Vol. 92, 1916, No. 637, pp. 170-175.

Sande Bakhuyzen, H. G. van de. **Comparison of the Dutch Platinum-Iridium Metre No. 27 with the International Metre M, as Derived from the Measurements by the Dutch Metre-Commission in 1879 and 1880, and a Preliminary Determination of the Length of the Measuring-Bar of the French Base-Apparatus in International Metres.** *Proc. Section of Sciences, Kon. Akad. van Wetenschappen te Amsterdam,* Vol. 17, Part 1, pp. 311-318. Dec., 1914.

Sande Bakhuyzen, H. G. van de, N. Wildeboer, and J. W. Dieperink. **Comparison of the Measuring Bar Used in the Base Measurement at Stroe with the Dutch Metre No. 27.** *Proc. Section of Sciences, Kon. Akad. van Wetenschappen te Amsterdam,* Vol. 17, Part 1, pp. 300-311. Dec., 1914.

PHYSICAL GEOGRAPHY

Geophysics

De Sitter, W. **On Isostasy, the Moments of Inertia, and the Compression of the Earth.** *Proc. Section of Sciences, Kon. Akad. van Wetenschappen te Amsterdam,* Vol. 17, Part 2, pp. 1295-1322. June, 1915.

Swann, W. F. G. **Atmospheric Electric Observations Aboard the "Carnegie," 1915.** *Monthly Weather Rev.,* Vol. 43, 1915, No. 12, p. 611. [Author's abstract of a paper read at the Pan American Scientific Congress in Washington, Dec., 1915-Jan., 1916.]

Walker, G. W. **A Portable Variometer for Magnetic Surveying.** Diagrs. *Proc. Royal Soc.,* Series A, No. 639, Vol. 92, 1916, pp. 313-321.

Geology and Geomorphology

Lawson, A. C. **The Epigene Profiles of the Desert.** Ills. *Bull. Dept. of Geol., Univ. of California,* Vol. 9, 1915, No. 3, pp. 23-48.

The alluvial fans, rock slopes, and flood erosion of dry regions are now sufficiently well known to warrant an attempt to treat them inductively. Professor Lawson makes this attempt in order to see whether it is possible to obtain new light upon the conclusions which have hitherto been derived deductively. In this he is successful. He discusses the processes by which weathering takes place and fans are built up at the base of mountain slopes. He speaks of the materials thus deposited as the ''embankment''—a term which may be desirable but which to the reviewer constantly calls up a picture quite different from that intended by the author. A much better new term is ''panfan,'' by which the author means the combined fans which together form the frontal apron of deposits at the base of a slope. In other publications he has used the term ''fanglomerate'' for the materials of such fans. These two terms are likely to be used permanently.

The chief new point in Professor Lawson's paper is the hypothesis that the comparatively smooth and gently sloping expanses of almost naked rock which are often found at the base of desert mountains are probably not due to sheet-flood erosion, as supposed by McGee. The recession of the base of a mountain by normal erosion is a process which goes on continually. Its details are here carefully explained. Erosion on the newly formed plain is soon checked by the deposition of fanglomerate, which covers it with a thin veneer. When the mountain is worn sufficiently low so that detritus is no longer brought from it to the fans, erosion may attack the veneer and carry it off, leaving a smooth plain of rock. This hypothesis seems at least as probable as that of sheet-flood erosion. As the effect of the climatic changes of the Glacial Period and later times is not considered, there are almost no places where the theoretical considerations here advanced can be adequately tested. It is probable, however, that some parts of southeastern California have always been dry enough so that they furnish approximately the desired conditions. It is possible that Professor Lawson's substitute for sheet-flood erosion might work more effectively if he would add to the present paper a consideration of what would happen during glacial and interglacial epochs and stages. During epochs of moist climate there may have been a stripping of fanglomerates, which would account for many of the broad rock benches without either sheet-flood erosion or the extreme degree of lowering of the mountain demanded by the hypothesis here suggested. ELLSWORTH HUNTINGTON.

CLARKE, F. W. **The Data of Geochemistry: Third Edition.** 821 pp. Index. *U. S. Geol. Surv. Bull. 616.* Washington, 1916. [A ''critical summary of what is now known [of geochemistry] and a guide to the more important literature of the subject,'' revised and enlarged from the first (1908) edition, which appeared as *U. S. G. S. Bull. 330,* and the second (1911) edition, which appeared as *Bull. 491.*]

HOLMES, ARTHUR. **Radioactivity and the Measurement of Geological Time.** Diagr., bibliogr. *Proc. Geologists' Assoc.,* Vol. 26, 1915, Part 5, pp. 289-309. London. [Abstracted in the April *Review,* pp. 305-306.]

PHYTOGEOGRAPHY AND ZOÖGEOGRAPHY

BERRY, E. W. **Notes on the Ancestry of the Beech.** Maps. *Plant World,* Vol. 19, 1916, No. 3, pp. 68-77. [Abtracted in this number on pp. 378-379.]

—— **Leguminosæ, The Distribution of, and Past Geographical Changes.** *Geogr. Journ.,* Vol. 46, 1915, No. 5, p. 399.

RIGG, G. B. **Physical Conditions in Sphagnum Bogs.** *Botanical Gazette,* Vol. 61, 1916, No. 2, pp. 159-163. [A summary from H. J. Cox's bulletin on frost and temperature conditions in the cranberry marshes of Wisconsin (*Weather Bur. Bull. T,* 1910) of data bearing on the ecology of sphagnum bogs.]

HUMAN GEOGRAPHY

ANTHROPOGEOGRAPHY

BRIGHAM, A. P. **Problems of Geographic Influence.** *Annals Assoc. of Amer. Geogrs.,* Vol. 5, 1915, pp. 3-25. [Abstracted under the title of ''Geographic Influences in the Field of Science'' in the March *Review,* pp. 223-224.]

HUNTINGTON, ELLSWORTH. **A Neglected Factor in Race Development.** Diagr. *Journ. of Race Development,* Vol. 6, 1915-16, No. 2, pp. 167-184. [Influence of climatic changes: work of Matthew, Brückner, Pettersson drawn upon, as in Doctor Huntington's article in the March *Review* on ''Climatic Variations and Economic Cycles.'']

MAUNDER, E. W. **The Principles of World-Empire.** *Journ. of the Trans. of the Victoria Inst.,* Vol. 47, 1915, pp. 11-34. London.

TRÄDGÅRDH, IVAR. **Människans andel i insekthärjningars uppkomst: Några biologiskt-geografiska synpunkter.** *Ymer,* Vol. 35, 1915, No. 3, pp. 273-281. [Man's part in causing insect ravages.]

ECONOMIC GEOGRAPHY

LYON, T. L., E. O. FIPPIN, H. O. BUCKMAN. **Soils: Their Properties and Management.** (Series: Rural Text Books.) xxi and 764 pp. Maps, diagrs. The Macmillan Co., New York, 1915. $1.90. 8 x 5½.

In the preparation of the 1915 edition of the former work of the same title by Lyon and Fippin, the authors associated with them their colleague, H. O. Buckman. The result of this renewed effort is ample cause for congratulation since the book is without question one of the most complete works in English on the subject of soils. The subject-matter has been much revised and rearranged in the present edition, and a generous amplification in the treatment of some of the old material has increased the size of the book from 531 to 764 pages. The usual fundamental principles of soils science are given ample consideration, and the origin of soils, the geological relationships therewith, the composition and classification of soils, and the outstanding features of the physical properties of soils receive careful consideration in the first seven chapters. Half again as much space as in the former volume is then given to the important matter of organic matter in soils, which in turn is followed by a new chapter on the colloidal matter of soils. The next five chapters treat of soil structure and of the relations of plants and soils to those two important requisites to plant growth—moisture and heat. The next two chapters deal at much greater length than the corresponding ones in the former edition with the availability of plant nutrients in soils and the absorptive properties of the latter. A chapter on the subject of acid soils supplants the very brief statements on the subject in the earlier work, and that is followed by chapters on alkali salts and on some plant-physiological principles relating to absorption of nutritive salts by agricultural plants. The succeeding chapters treat of soil organisms, soil air, commercial fertilizers, soil amendments, fertilizer practice, farm manures, land drainage, tillage, irrigation and dry farming, and the soil survey.

Altogether the subject-matter is lucidly, though briefly discussed, and the student finds in the new work an excellent and helpful bibliography, which was missing in the first edition. The latter fact easily compensates for the deletion of many of the illustrations of the earlier volume. Most welcome of all is the clearly marked tendency of the authors to burst the shackles of conservatism which bind many of us so securely to the old and revered "orthodoxy" in soils science and to emerge into the atmosphere of "modernist" progress. It would have been better to carry this tendency still farther. The chapters on commercial fertilizers, farm manures, tillage, and the like might have been much more curtailed and those on plant-physiological principles, soil colloids, available plant nutrients, adsorption and absorption much more amplified. Despite all this, their colleagues owe a debt of gratitude to the authors for a comprehensive and very readable text on soils.

CHARLES B. LIPMAN.

TAUSSIG, F. W. **Principles of Economics.** 2nd edit., revised. Vol. 1: xxxvii and 547 pp. Diagrs., bibliogr. Vol. II: xviii and 573 pp. Diagrs., index, bibliogr. The Macmillan Co., New York, 1915. $4. 8½ x 6.

This book, published originally in 1911 and reprinted seven times before the appearance of the present edition, has been warmly received by economists. Though widely used as a textbook for college students beginning the study of economics, it was not prepared primarily for this purpose. The writer's object in making the book was "to state the principles of economics in such form that they shall be comprehensible to an educated and intelligent person who has not before made any systematic study of the subject." Professor Taussig's purpose has been well accomplished, and it can be truly said that his work presents in readable form the fundamental conclusions of modern economists and the lines of reasoning upon which such conclusions rest. It may, perhaps, be correctly designated an orthodox or theoretical treatment of the subject based upon wide observation and sound common sense. There are some economists of the present day who emphasize the importance of geographical factors (along with various other factors) in explanation, in part at least, of certain economic phenomema. There is little if any indication in Professor Taussig's book that such an idea should find expression in a treatise on the principles of economics. There is, however, in the chapter on the division of labor an interesting discussion of geographical division of labor, its causes and consequences. Again, in the discussion of the theory of international trade, the student of economic geography will find some material sufficiently related to his own particular field to furnish food for his serious thought. Nevertheless, it must be admitted that there are to be noted in Professor Taussig's volumes but few points of contact between the fields of economics and geography. The book may be warmly commended, however, to the serious attention of geographers not because of any contribution which it makes to the fund of geographical knowledge, but because of the broadening effect which it is bound to produce upon geographers from coming in close touch with a high-grade work in the social sciences where the main line of interest is mankind.

AVARD L. BISHOP.